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**SO, YOU WANT TO BE A J6 ? !**

**Core Course 5 Essay**

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SO, YOU WANT TO BE A J6?

During the past ten years, three significant United States Military Operations have been conducted by three separate CINC's. Despite communication success, failure, and documented lessons learned following these operations, the J6 on a CINC's staff does not have a published framework for communications planning. This essay proposes such a framework using lessons learned from our most recent military experiences; Grenada (Urgent Fury 1983), Panama (Just Cause 1988), and the liberation of Kuwait (Desert Shield\Storm 1990).

Communications Planning for the operational level of war requires the following broad categories be considered for planning and execution:

1. Identify Command Structure and Command Relationships - The J6 must press the J3 and if necessary the CINC to clearly define command relationships and command structures, immediately. From this decision, two key elements for further communications support planning emerge, the first time-sensitive requirement is to generate the JCEOI (Joint Communications Electronic Operating Instructions), and, the second requirement is to identify organic equipment of the deploying forces.

a) A JCEOI IS REQUIRED FOR EVERY JOINT OPERATION - A JCEOI need only extend down to component level if services are not cross attached below that level. However, if the operation is organized by task force, and, is a small operation highly dependent on single channel SATCOM and combat net radios, then, the JCEOI may include nets down to the company or platoon level. The J6 Staff may either coordinate the building of the JCEOI or designate a service as responsible agent. National Security Agency (NSA) maintains a data base with unit CEOI's from all services and can assist in the rapid production of JCEOI'S. If the operation is small, the Army has the BECS automation system for CEOI generation. Operation Urgent Fury provides a sobering example of what happens when there is no JCEOI. Communication planners and other support planners were not included in the planning process until 48 hours prior to execution of Operation Urgent Fury. JTF'S were newly formed from units which had never trained together. JTF Commanders could not communicate with each other on a common net. Fire support personnel were unable to talk to each other. Marine and army ground units could not communicate because neither service knew the radio net frequencies of the other service. 1 By contrast, during Operation Just Cause, the command structure and relationships were identified approximately 5 months prior to the operation. Planners in every functional area were included early. Although fairly elaborate cross attachment of forces occurred down to battalion level ( 9 task force organizations), everyone could talk using the JCEOI.

The XVIII Airborne Corps Staff, as the CINC'S designated responsible agent generated the Just Cause JCEOI. In addition, rehearsals were conducted using the proposed command and control structure. The fire support plan was coordinated and rehearsed with all services. 2 Desert Shield\Storm provided a different experience. Although there was approximately 5 months of force deployment time, there was not 5 months of planning time to generate a JCEOI. Units were forced to deploy with training CEOI'S unless the unit had participated in a joint exercise completed just prior to the August Iraqi invasion of Kuwait. The Joint Exercise participants deployed with an exercise JCEOI. Components began generating a Desert Shield\Storm JCEOI using NSA data bases just prior to their own deployment. Because of the force size and the fluid command structure, planners made their best guess for follow-on force requirements. NSA shipped JCEOI'S to the theater approximately six weeks after the initial submission. 3 IF possible, the J6 planner should insure every OPLAN has an JCEOI sitting on the shelf ready to distribute. If unexpected contingencies arise, then the J6 must make a decision on a JCEOI work around until the problem can be fixed. Whatever the decision, guidance must be published by the J6 so all services understand the temporary solution and the estimated time of the problem resolution.

b) Identify service communications assets to determine interoperability problems - Each component deploys with organic communications equipment. The J6 planner should determine if interoperability problems are severe enough to

threaten mission success. If interoperability problems are too severe, then, the J6 must make a recommendation to change the force composition. IF the problems are minor, then, the J6 begins planning the engineering solutions required to build a working communications architecture.

2. Land Management - In large operations such as Desert Shield\Storm, land management for arriving forces is key to initial command and control. Communications infrastructure may be limited and fragile. For this reason, assembly areas must be designated for arriving forces in coordination with communication planners. Only with this type of coordination will the CINC retain control of his forces throughout the entire operation. During Operation Desert Shield\Storm, land management was left to individual units. As a result, many units were initially out of touch with their higher headquarters. Units were forced to relocate to gain access to the communication system. 4

3. Circuit Switch Network Planning - Circuit switches provide tactical telephone access to headquarters elements in theater. The interfaces and interoperability problems between component networks must be identified by the J6 planner prior to deployment. Designating component interfaces with host nation commercial telecommunications facilities and gateways to the defense global infrastructure (autovon) are the responsibility of the J6 planner. In addition, depending on the condition of the host nation telecommunications infrastructure, it may be necessary to task components to provide circuit

switches to support infrastructure missions. For example, telephone service to ports, the embassy, non-governmental organizations, local fire or police stations can be provided on a temporary basis by the military until civilian services can be restored. The J6 planner determines the size and depth of the circuit switch network based on operational requirements. The Desert Shield\Storm circuit switch network was the largest in history. At the height of the operation the system supported over 700,000 telephone calls per day. Additionally, there were over 2,500 joint circuits sharing switch capacity which reduced in-theater equipment requirements. The J6, CENTCOM, was the facilitator and coordinator of this network. 5

4. Message Switch Network Planning - Although most message traffic today goes by EMAIL (electronic mail) or PC to PC(personal computer) file transfer, the requirement to send and receive autodin messages still exists down to Corps and Division in the Army and possibly to lower levels in the Navy and Air Force. A message switch architecture is required in all theaters. The J6 planner develops the theater architecture, identifies interfaces between services, and identifies and recommends solutions to interoperability problems prior to deployment. In addition, the J6 publishes routing indicators for all the theater message switches. Routing Indicators are required for both GENSER (general service) traffic and Y traffic.

5. Data Network Connectivity - Electronic mail has become an informal message system within and between the services.

The requirement to provide email connectivity to the theater emerged from Desert Shield\Storm. The level of email connectivity is still being debated. Regardless of the debate results, the J6 must propose an email connectivity architecture.

6. Theater Frequency Management - The J6 must determine the methods used for theater frequency management. If the operation takes place in a small geographic area with limited forces (such as Urgent Fury or Just Cause) this task may be completed prior to deployment. A well prepared JCEOI provides all frequencies for combat net radio and single channel TACSAT. An operation as large as Desert Shield\Storm requires an elaborate automated frequency management system. There were over 30,000 frequencies used everyday during the Desert Shield\Storm operation to support the line-of-sight multi-channel communications systems. In addition, combat net radios and single-channel TACSAT used thousands of frequencies per day provided by the JCEOI.

7. Personal Computer use in the theater - Prior to Desert Shield\Storm deployment, some services issued directives to their personnel not to deploy PC's from home station. These type of directives were universally ignored. As a result, the directives were rescinded. Computer maintenance became an increasingly important issue for CENTCOM during operation Desert Shield\Storm. Many military maintenance units were unable to repair commercial computers because maintenance support is provided by civilian maintenance contracts at home station.



To alleviate this problem on future operations, the J6 planner must coordinate with the J4 to include commercial computer repair as a area of interest for component logistics plans.

8. Functional Area Architectures - Modern weapons and support systems in the theater require extensive communications support for the optimum use of the system. These critical systems must be identified by the J6. The J6 must insure that the planned communications architecture provides the required support for all of the theater's critical systems. If the architecture does not exist, the J6 must bridge the gaps. An example of some of these critical systems are:

a) Intelligence systems - Coordinate with the J2 to identify all dissemination requirements and verify connectivity exists to meet the dissemination requirements.

b) Fire Support systems - Coordinate with the J3 to identify joint fire support requirements and verify connectivity exists to meet the fire support requirements.

c) Air Defense systems - Coordinate with the J3 to identify joint air defense requirements and early warning dissemination requirements and verify connectivity. Normally the air defenders have a separate communications system; however, in a joint operation it may be necessary for the J6 to offer assistance to develop a joint air defence architecture and solve interoperability problems.

d) Air Space Management - Coordinate with J3 to identify joint air space management requirements and verify connectivity.

e) Imagery systems - Coordinate with the J2 and J3 regarding dissemination requirements for imagery products and verify connectivity.

f) Theater Ballistic Warning systems - These systems may be part of, or, separate from the air defense systems. The J6 planner must understand the network and may be involved in developing the architecture. The J6 should act as an advisor to solve any connectivity problems inside or outside the theater and assist to resolve communications or software interoperability problems.

g) Air Tasking Order system - The air tasking order is a critical document directing the air campaign; therefore, the J6 planner should coordinate with the staff of the Air Commander to determine dissemination requirements, identify any connectivity problems or software problems, and provide advice and assistance to solve those problems.

h) Logistics system - Depending on the size of the operation, the J6 planner may have to task components to provide circuit and data switching services to logistics bases. The J6 planner must coordinate with the J4 to identify the command structure of the logistics operation and then insure component plans support logistics infrastructure requirements. Components that cannot support their logistics infrastructure must identify communication shortfalls to the J6 for resolution.

9. Communication Packages for Liaison Teams - In coalition warfare liaison teams with organic communications equipment are essential for smooth command and control. The J6 coordinates with the J3 to determine how many teams are required and makes a recommendation which service to task for the teams. The recommendation is based on the proposed theater communications architecture, the geographic location of the team, and the type of equipment available in each service.

10. Small Planning Considerations which have a direct impact on mission success:

a) Comsec Keys - J6 must insure that a comsec key is designated for every secure system in the theater. This drill will most likely require a face to face meeting, in addition to, a published and disseminated list of comsec keys. Comsec key information is normally disseminated by autodin message prior to deployment or listed in the OPLAN.

b) Software Configuration Management - The J6 should designate a software configuration manager for every joint weapons system and support system in theater. The identity of these managers should be widely known (published by message or listed in the oplan). All software problems related to a particular software should be sent to the designated software manager. The system software manager coordinates with the J6 to deploy appropriate software engineers to solve problems. The software manager should be given specific duties by the J6. The software manager is also responsible to insure new software

shipped to the theater is distributed to all of the system users. In addition, the system software manager dictates the version of software for their assigned weapons\support system in the theater. Designating a software manager, by system, will reduce software interoperability problems in the theater.

c) IFF Codes - Applicable IFF (Identify friend or foe) codes are normally published in the JCEOI. J6 planners should verify these codes have been distributed to U.S. personnel and coalition partners.

d) Tactical Telephone Directories - Most components have tactical telephone directories. If there is time, J6 should publish a joint telephone directory. A better option is to build a tactical telephone directory for every OPLAN. If there is not time to publish a joint directory and one is not on the shelf with an OPLAN, then, the J6 should direct all services to bring extra copies of their own directories for distribution to other services. Distribution between services should be in accordance with the command structure. For example, if a Army Division works for a Marine MEF then the Army Division provides Division phone directories to the MEF and the MEF provides MEF directories to the Army Division. J6 should have a copy of all tactical phone directories.

11. Navigation - The J6 planner should make a recommendation to the J3 regarding the GPS (Global Positioning System) satellites.

The J3 must determine if the satellite encryption should be on or off. The J6 recommendation should be based on the number of military\civilian GPS receivers in the theater. During Desert Shield\Storm, the decision was to de-encrypt the GPS signal so that the high precision mode could be used by all the coalition forces. 6 In addition the J6 should consolidate and forward to the Joint Staff any component requirements for additional navigation receivers.

12. Satellite Access Priorities - The J6 planner must recommend prioritization of satellite access to the J3. While this was not a critical issue during Desert Shield\Storm, it will become a pivotal issue if simultaneous operations occur in different theaters. The J6 planner should consider all available satellite systems to support the theater ( Allied systems and commercial systems).

13. Evaluation of Components communications support plans to accomplish the CINC'S objectives - The J6 should evaluate each components communication support plan. This evaluation process is of particular importance when lines of communication are extended during an offensive operation. The focus of the evaluation is to determine if communications equipment in the theater is adequate to execute the mission with minimal risk. If the J6 believes there is an equipment shortfall, the J6 is obligated to advise the J3 and if necessary the CINC so that the shortfall can be rectified prior to execution of the mission.

14. Threats to C3 systems - The U.S. C3 system has never been targeted for jamming or destruction during recent military operations; however, there is still a significant threat to these systems. The J6 planner must identify the vulnerabilities of all communication architectures and develop counter measures and alternate routing paths where possible. In addition, after wargaming the operations plan and determining possible losses to the communication system architecture, the J6 should require the components to develop a baseline document for C3 theater war reserves planning and reconstitution.

15. Combat Camera Crews - The J6 should determine if the CINC wants combat camera crews in theater to support the joint headquarters. If the answer is yes, then the J6 must task a component to provide the crews.

16. CNN terminals and Media support - The J6 must consider CNN access and media support. Based on the adequacy of the theater communications architecture the J6 recommends a theater policy regarding media access to military communications to file stories. The J6 also recommends or coordinates CNN satellite receivers for headquarters elements in theater.

17. Morale, Welfare calls - The J6 develops the theater policy regarding morale, welfare calls over military communications systems. The J6 recommends alternatives for making morale welfare calls. For example, providing phone centers from commercial vendors to large troop areas.

#### WORKS CITED

1. Cummins, Gerald, Jr., Maj. USA, Urgent Fury: Where Fire Support Missed the Target. National Defense University, 1986.
2. All other source documents for this paper cannot be listed due to classification.

In summary, the J6 planner today has a tremendous challenge. That challenge is to integrate all of the systems of all of the services. The numbers of these systems are increasing exponentially. The relative value of any theater system is based on the ability of the communications architecture to support the system requirements. Continued coordination and cooperation is required between the those who use the communication system and those who provide the communication system. In addition, joint exercises should place major emphasis on communication planning and training.